MSI PLUS

Hyper – Smart Retail

Smart Retail with IoT technology

Smart retail is an intriguing solution to create higher service level and plenty business opportunity. Today, it's able to manage a retail chain for many stores with many equipment units, a lot of commodities, logistics network, commercial promotion and to know about consuming behavior. With the Internet of Things (IoT), a new era begins for retail. The benefits of IoT in retail like tracking machines and automated commands have been on the way.

Create benefits through network

- Surveillance at everywhere: The retail IoT solutions link to CCTV system, which can help the floor managers and shop owners to monitor and traffic of visitors.

- Consumer behavior analysis: By non-intrusive IR sensors, digital interactive kiosks, mobiles device apps, digital signage, etc. All devices require highly reliable network for well connectivity.

- Central/Automated control: market lightening, media broadcasting, air conditioners, and energy conservation by control center.

- Smart devices interaction: Consumer could use smart phone, tablet for stores apps application, like AR in clothes/furniture.

An ideal smart retail system needs intelligent network solutions to sustain high speed transmission with low latency and simplified infrastructure in retail. Therefore, MSI aims to construct a completed and high customized network series for IT integrator.

MSI micro IoT gateway solution

In the smart retail exists numbers of sensors everywhere, a IoT gateway is to collect all information from local sensors and upload to cloud center to manage and response. (figure 1.) With the amounts of sensors, to deploy IoT gateway is necessary infrastructure as a data broker. Here's some critical functions to archive.
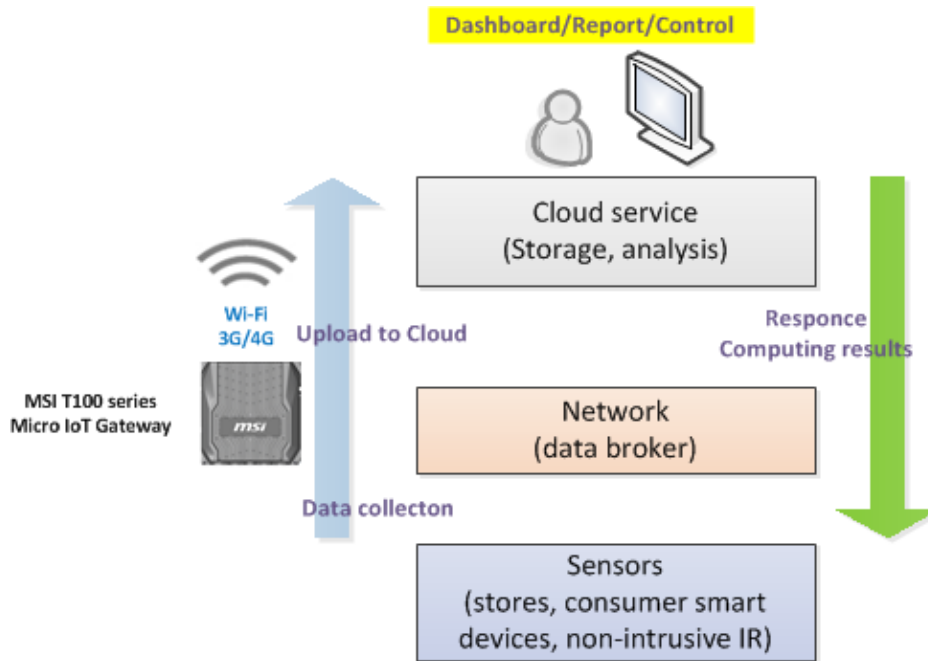
1. **Mobility and compact**

   MSI T100 is designed in a very small box and able to wall-mount at everywhere. Base this compact design, T100 can be located in every places and provide more selling space.

2. **High speed network with security and manageability**

   Smart Retail needs a secured network and low latency to archive such high application for everything, everyone.
   MSI T100 provides wireless service to connect machines through Wi-Fi/3G and 4G in order to sustain higher and higher bandwidth requirement.

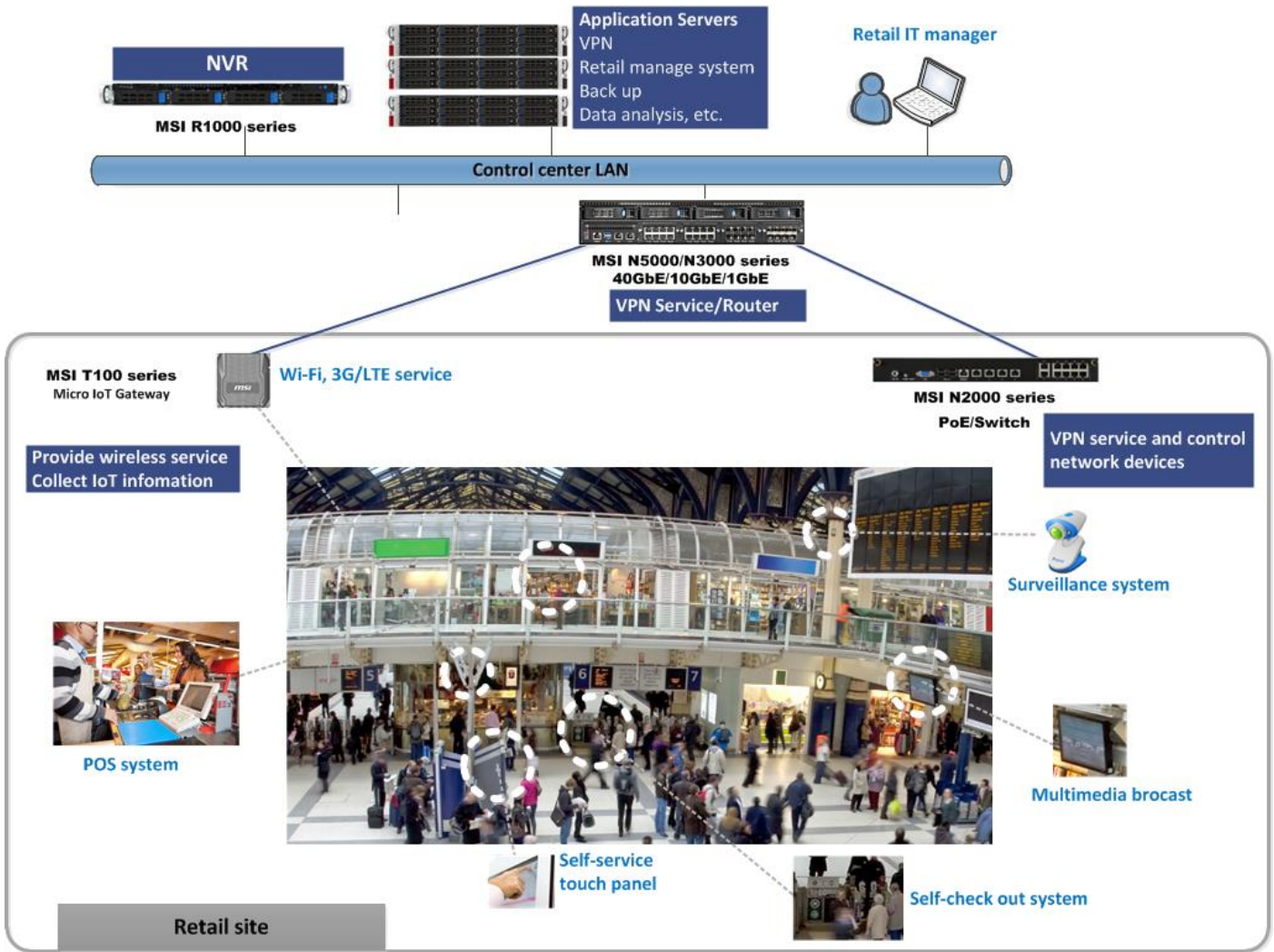**Figure 1. MSI micro IoT gateway architecture**

NVR in Smart Retail

MSI also provides R1000 series to sustain NVR requirement and be able to link to MSI S1000/2000/3000/4000 series high density storage for cold storing. Surveillance is important factor for smart retail, so that build with a proper NVR system for CCTV is a necessary infrastructure.

Smart retail needs smart security network

In smart retail field, the high security ability of networking is highly requirement for IT integrator. Attribute to more and more personal information being tracking by sensors, commercial secret information, authorization identity, and things controlled by control center simply. Therefore, MSI provides N5000/N3000 to be high end/middle end level as a powerful router and security service (VPN, Firewall, etc.). On the other hand, N2000 series is easy to install and to reduce edge site network capital cost for linking to surveillance system, media broadcast, kiosk, energy saving controller and so on. In order to control everything by network without security issue. As figure 2 presented.

Figure 2. MSI Smart Retail architecture

NVR

MSI R1000 series

Application Servers
VPN
Retail manage system
Back up
Data analysis, etc.

Retail IT manager

Control center LAN

MSI N5000/N3000 series
40GbE/10GbE/1GbE

VPN Service/Router

MSI T100 series
Micro IoT Gateway

Wi-Fi, 3G/LTE service

MSI N2000 series
PoE/Switch

VPN service and control
network devices

Provide wireless service
Collect IoT infomation

Surveillance system

POS system

Multimedia brocast

Self-service
touch panel

Self-check out system

Retail site

MSI solutions for Smart Retail

Network Video Recoder
(NVR)
Store huge video data solution
o o : Discover

Performance
High end security solution in
Telecom and large enterprise
o o : Discover

Mainstream
Enterprise and campus
security solution
o o : Discover

Server Message Block
(SMB)
Small box security service and vCPE
solution
o o : Discover